

# Arden Heritage – Solid Hardwood

**Wood Floor Sales Ltd**  
Adams Way,  
Arden Forest Estate,  
Alcester Warwickshire  
B49 6PU

Arden Heritage a Wood Floor Sales Group Product

t : 01789 400050  
f : 01789 400049  
e : technical@wfs-online.co.uk



## Introduction

Thank you for choosing Arden Heritage Solid Hardwood flooring from Wood Floor Sales Ltd.

These Instructions are designed as an overview; they are by no means exhaustive and should be used as a guide. The information contained herein is as accurate as existing experience will allow. However in many areas it may conflict with the seriously outdated BS8201 guidelines for fitting hardwood flooring. If in doubt ask.

This product should reach you in good condition. Please check the delivery, if there are any visible defects or the colour or quality is incorrect **DO NOT INSTALL IT!** Immediately advise WFS.

If the floor is installed it will be deemed acceptable and correct, WFS will not entertain retrospective complaints.

## General practice

Arden Heritage is "end matched" i.e. tongue and grooved on all four sides. This means that is not necessary to support the end of each board onto a joist, it is however important to make sure that the header joint is not place any closer than 200 mm on adjacent boards. This is athletically bad practice, and weakens the floor. It is also a good idea to "rack out" the floor in groups of 4-6 rows of boards in order to check the fall of the joints. It is also faster to install the boards if the floor has been racked out. Nailing is carried out using a Porta nailer all similar approved. This semi-automatic nailer uses a barbed type nail that holds securely for a permanent fixing. It also has enough strength to straighten bowed boards should this occasionally be necessary. Straight shank nails fixed by hand usually tend to become slightly loose with time, and often start to squeak when walked on. Every board is nailed to every joist, handed nailing only takes place for the first and last 2-3 rows of boards as you cannot use the Porta nailer close to a wall. It is NOFMA recommended practice to face nail and fill the first and last rows however it is also possible to use SikaT2 for this purpose.

**Caution:** Do not Use Over Underfloor Heating

**Caution:** Do Not Glue Down Pine, Stained Pine or Beech Floors

**Caution:** Solid hardwood flooring should not be installed in areas subjected to excessive moisture; i.e. Bathrooms, Utility rooms

## Machining Tolerances

Arden Heritage is a natural product and a tolerance of up to +/- 1% must be allowed in the board width This is not a product fault and does not impair the performance of the floor Natural expansion and contraction can occur within the hardwood during the changes of season.

## Upon Delivery

Arden Heritage should be stored in clean and perfectly dry premises with no direct contact with the ground. There must be no vapour condensation or damp. Arden Heritage must not be exposed to the weather or stored outside. The floor should be stacked on equal battens on a flat surface. Do not lean upright against a wall!

## Storage (Before Laying)

Arden Heritage must be stored in its original packaging, sealed, in the room in which it is to be fitted at least 24 hours before installation starts. The room must be at a temperature and humidity level, which is equal to the environment in which it will be installed.

## Sub Floor and Site Environment in Detail

### Testing

Wood Floor Sales sell a range of moisture testing equipment to measure accurately. If there is any doubt, or if you do not possess metering equipment, it is strongly recommended that a surface membrane such as Sika 156 (or similar approved) be used when fitting directly to concrete screeds. Never assume the floor is sufficiently dry. Check before you begin!

### Important

It must be stressed the importance of dry site conditions before, during and after laying hardwood flooring. Particular attention should be given to the moisture content within the slab. The guidelines in "Sub Floor Moisture" should be observed.

The conditions we recommend are much drier than those specified in BS8201 but they essential for Arden Heritage, which is pre-dried to an average moisture content of 8%-9%.

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Arden Heritage floors are kiln dried so that the average moisture content lies within the range 8% 9% and are not recommended to be used unheated buildings or those which remain un-heated or exposed to increased levels of humidity for long periods, additionally, long exposure of the floors to high temperatures may cause damage to the natural wood. The sub floor must be sound, dry, smooth, level and dust free

The room temperature should ideally be 15-20 deg C before during and immediately after installation.

New buildings must be weather tight. All concrete, masonry and plaster must be thoroughly dry before the flooring is delivered to site Basements or Cellars should be completely dry and well ventilated. The concrete slab must be sound and flat, 2-3mm over 1 Linear Meter if using Sika" Accoubond Sound insulating system.

Please read the following section for details:

### South Facing Conservatories & Sun Rooms

During the summer months, the temperature and humidity within a closed conservatory, roughly south-facing, are likely to significantly exceed the recommended guidelines (very high temperatures and low humidity) and solid wood floors should be used the knowledge that seasonal gapping of the boards may occur. Automatic ventilation and temperature control may be used to regulate the conditions and a solid roof or blinds will reduce the worst effects of the sun. Please ask for advice.

### Sub Floor Conditions.

Wood Bonded Direct to Concrete - Reduce concrete RH to 75% minimum & preferably 60% before installation.

BS 8201 suggests that the slab should be a maximum of 75% RH or 5% moisture content. Whilst this may be sufficient for some floor coverings, it is far too high for kiln-dried timber in direct contact with the slab. Sika 156 sealer should be used to produce moisture and vapour impermeable layer. Sika 156" is compatible with Sika adhesive Bonding systems.



## Sub Floor Moisture Content Explained

Moisture in the sub floor is still identified as the most significant reason for installation failure of any wooden or indeed laminate floor.

The vast majority of complaints are directly attributed to moisture, mainly from the concrete slab. Remember that a slab should in theory (post 1964) have a membrane incorporated; too often these are badly fitted and therefore ineffective. New slabs obviously carry significant amounts of moisture and great care should be taken!

At 20 C and 75% RH timber will achieve equilibrium moisture content of about 16%, our flooring is dried to about 9%. That 7% difference would produce an expansion of about 12mm per metre width of the floor and the whole floor would understandably fail. If the timber (at 8%) is to be in direct contact with the concrete, the RH of the slab must be about 35% or 2%-2.5% moisture content. If it is not then there must be a damp proof membrane between the slab and the timber. In practice it is very difficult to achieve 35% RH in the slab.

## Moisture Barriers- (Liquid Membranes) Reaching acceptable conditions.

On young or green screeds, up to a maximum of 12% moisture by volume, a dramatic reduction in waiting times can be achieved by using the following Sika Moisture barrier system:

This comprises firstly of EpoCem 81. EpoCem 81 is a 3-component cementitious product with a similar consistency to levelling compound. It may be used for minor levelling but may prove expensive for general levelling; this may be done with a conventional screed prior to using EpoCem 81.

The primary reason for using this product on “green” screeds is to reduce the levels of moisture / vapour being released from the slab prior to, the application of Sika 156 liquid membrane. Sika 156 provides a permanent surface membrane that can be bonded to directly.

As a minimum on established screeds of 4% moisture by volume (as a rule of thumb over 1 year old) two coats of Sika 156 can be used without the need for the EpoCem 81. Application of the liquid membrane Sika 156 must be carried out with care. The definition of membrane is a complete unbroken film; the final result should be high gloss, often described as looking like “Glass”.

Please note: “Fisheyes or Blowholes” in a badly laid levelling screed over concrete, must be filled using EpoCem 81 prior to using Sika 156, even if the floor condition would normally only require the use of Sika 156. Sika 156 alone will not plug or seal these blowholes and the floor will effectively be untreated!

## Post Installation Environment.

The largely outmoded BS8201 suggests a range of average moisture contents to suit varying conditions: -

- Unheated - 15% to 19%;
- Intermittent Heating - 10% to 14%;
- Continuous Heating - 9% to 11%;

However The recommended ambient conditions for Arden Heritage in service should be in the ranges: -  
Average Temperature - 15°C to 25°C Average Relative Humidity - 35% to 45% at 20°C.

Provided that the average conditions remain close to the ranges specified then reasonable short-term variations should not affect the stability of the floor. As a guideline, a 1% change in moisture content across the floor could, in theory at least, produce a movement of about 2mm per metre width of the floor.



## Installation

Depending on the site environment there are 2 methods of fixing Arden Heritage Flooring:

- 1 **Bonding** - Bonding the flooring to a concrete sub floor
- 2 **Nailing** - Secret nailing the flooring to a wooden joist or baseboard.

### Bonding

There are three options of bonding Arden Heritage to a suitable sub floor. Due to the fact that occasional boards may be very slightly bowed, and to keep the boards tight whilst fitting, it is important that laminate clamps/straps are used during fitting.

The overriding principle of this system is that the floor is allowed to expand and contract during seasonal changes. This is unlike nailing that can gap after a few seasons of movement. The joints should remain tight.

A 15mm expansion gap should be left and is sufficient in normal domestic rooms. Do not use PVA adhesive on the joints, PVA may be used to place "cuts" around the perimeter

#### Option 1. T52 Accoubond with Silent layer Matting. (Acoustic)

This comprises T52 in easy to use aluminium foil "sausage" format, which is "gunned" with a special applicator into pre-cut slots in an acoustic underlay system (Silent Layer mat).

T52 is a highly elastic polyurethane adhesive, when used with the Silent Layer mat, creates a very quiet floor with excellent sound absorbing properties.

This system reduces transmitted sound by 21db, sufficient to qualify with the new stringent building regulations. (Addendum: The matting is now available in a 5mm format which now qualifies it so it can be safely used without specific testing on site)

#### Option 2. T52 & New T54 Fully bonded.

This is a single component trowel applied adhesive with an open time in excess of 1 hour As with all Sika polyurethane adhesives this trowel grade adhesive remains highly elastic, making it suitable for use with Arden Heritage.

They are also the most economical of the 3 systems. T54 being slightly cheaper than T52, the only disadvantage being that it has a longer "grab" time. T54 is probably more suited to large areas.

#### Option 3. T2 Liquid Batten.

Best described as a "Problem Solver". T2 and has the ability to compensate for variation in levels of up to a maximum of 8mm T2 is significantly more viscous than T52 with very little "slump" T2 should be used as a liquid batten but centres must not exceed 200mm otherwise not enough adhesive is being used.

As a system WFS took over 1 year testing in the UK and investigating the use of the Sika system in Europe. At present we are testing other systems however the only complete system we are currently prepared to recommend is the Sika System.

**DO NOT USE ACRYLIC or NEOPRENE BASED ADHESIVES!** They are too brittle! Instructions for use are provided with the Sika adhesive. If in doubt phone Wood Floor Sales. 01789 400050.

## Nailing

Installing onto Wood (Secret Nailing)

### Nailing to Plywood over Concrete Slab

(Applicable to 14mm, 20mm Arden Heritage)

It is possible to secret nail Arden Heritage Wood flooring to an 18mm Ply base over a Concrete sub floor, This system uses ply laid over a 1000 gauge polythene or Builders paper, overlapped" by 250mm & taped to prevent moisture ingress,

The Ply (checked for moisture content) is laid at 90 degrees to the new floor to prevent gapping or cracks associated with panel edges, Sub floorboards are fixed with a minimum of 10 fixings per board. A Hilti gun may be used if the fix is good enough, alternatively the boards may be Plugged and Screwed.

The screw fixings will of course puncture the DPM, but if the concrete is down to 60% RH this should not be a problem. Arden Heritage may then be nailed to this base in the normal way with a Portanailer or similar using barbed nails. Straight shank nails will eventually work loose and squeak.

### Secret Nailing to Suspended or Timber Sub floors

If Arden Heritage is to be installed over a suspended timber joist floor, there should be cross ventilation provided by unrestricted air vents to the outside of the building with no dead air areas.

If you are sure there is good ventilation, and the moisture content of the joist is below 14 percent then it is suitable to install, however, we recommend that a 1000 gauge polythene membrane is draped over the joist to prevent moisture ingress to the back of the board. Also, builder's paper, impregnated with bitumen, may be used as an alternative so long as is also correctly jointed.

New timber joists, battens and supporting timbers.

Should have a maximum moisture content of 14% and be vacuum treated with a solvent-based insecticide/fungicide such as Protim 80. If water based treatments are used, the timber must be re-dried to under 14% moisture content before use.

### Secret Nailing to Battens

(Applicable, to 20mm & 22mm Arden Heritage only)

It is possible to lay Arden Heritage indirectly to a concrete sub-floor using battens. This would usually be used where a height difference needs to be made up.

The batten needs to be 50mm wide and minimum 50mm deep. If the floor is to be fixed indirectly to the slab and the concrete is well dried, a polythene or building paper DPM may be used. The screw fixings will of course puncture the DPM, but if the concrete is down to 60% RH this should not be a problem.

If the slab is too wet, bond the battens to the slab with SikaT2, after using Sika 156 surface membrane (see the section on Elastic Bonding). Arden Heritage may then be nailed to this base in the normal way with a Portanailer, or similar, using barbed nails.

### Existing Boarded, Chipboard or Plywood sub-floors.

All joists and boards should be in good structural condition, level and free from rot or insect attack. It is advisable to treat any timber against fungal and insect attack regardless of the age or condition of the floor. The moisture content of the sub-floor should not exceed 12%. In any event always use a building paper under the new floor



## Care

### Protection

Protect the entrance areas, inside and outside, with barrier mats to avoid walking grit and water onto the floor. Felt pads should be used to protect the floor from furniture and furniture legs. Castor cups should be used to prevent castor damage from sofas etc.

### General

Sweep through or vacuum with a suction machine, with the brush head lowered, to remove all loose dirt from the floor. NEVER use WET cleaning methods. Excessive water moisture will damage the natural flooring and may discolour the surface

Natural Varnish Finish

To remove heavy soiling from the surface, use a well wrung out cloth with a Dr Schutz or Bona cleaner. The floor may then be treated with a “refresher” to supplement the surface lacquer. Tarkett Refresher Dressing or Bona “Parkett Polish” may be used very sparingly. If these maintenance products are over applied, they will start to delaminate from the original lacquer. It may require professional services to rectify this delamination.

### Maintenance

Care & maintenance of your new floor is dependent upon the finish you have purchased

#### Lacquered

#### Pre-Oiled

As with a natural varnish floor, use a very well wrung out cloth or mop to carefully damp mop the floor, over use of water can be damaging. For periodic maintenance, a product is available from Bona called “Carl’s Oil” Again this should be applied in accordance with the manufacturers instruction very sparingly.